

**HEALTH & SAFETY PLAN**  
**GREAT LAKES NAVAL TRAINING CENTER**  
**REMODEL WILLOW GLEN GOLF COURSE**  
**GREAT LAKES, ILLINOIS**

**AUGUST 1998**

**HEALTH & SAFETY PLAN  
GREAT LAKES NAVAL TRAINING CENTER  
REMODEL WILLOW GLEN GOLF COURSE  
GREAT LAKES, ILLINOIS**

**FOR**

**U.S. NAVY  
GREAT LAKES NAVAL TRAINING CENTER  
GREAT LAKES, ILLINOIS**

**SUBMITTED**

**AUGUST 1998**

**PREPARED BY**

**GREAT LAKES OFFICES OF TOLTEST, INC.  
1915 N. 12<sup>th</sup> Street  
Toledo, Ohio 43624  
(419) 241-7175  
Great Lakes Office (847) 625-8083**



Founded in 1927

Toledo, Ohio • Detroit, Michigan • Monroe, Michigan • Pittsburgh, Pennsylvania

August, 1998

Mr. J.P. Messier  
U.S. Navy  
Building 1A  
Great Lakes Naval Training Center  
Great Lakes, IL 60088

Health & Safety Plan  
Great Lakes Naval Training Center  
Willow Glen Golf Course  
Great Lakes, Illinois

Dear Mr. Messier:

TolTest, Inc. is submitting this Health & Safety Plan for the Willow Glen Course Project at the Great Lakes Naval Training Center in Great Lakes, Illinois for your review and comments.

Should you need any additional information, please feel free to contact me at (847) 625-8083

Sincerely,

TolTest, Inc.

A handwritten signature in black ink, appearing to read 'Gary L. Vogelsong'. The signature is fluid and cursive, with the first name 'Gary' being more legible than the last name 'Vogelsong'.

Gary L. Vogelsong  
Program Manager

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## **HEALTH AND SAFETY PLAN**

### **FOR WILLOW GLEN GOLF COURSE REMODEL GREAT LAKES NTC GREAT LAKES, ILLINOIS**

TolTest, Inc. is responsible for the safety, health and emergency response provisions for Delivery Order No. 018 for this contract. These provisions are provided through the development and implementation of the following sections: Site Safety and Health Plan, Accident Prevention Plan and Emergency Response Plan. These plans are detailed here-in. All personnel on site, contractors and subcontractors included, will be informed of the Safety, Health, and Emergency Response Plan (SHERP) and any potential health and safety hazards of the operation.

The implementation of the WORK PLAN includes dredging, excavation and construction of four ponds, installation of an irrigation system, construction of new tee boxes, greens complexes, fairway sand traps, fairway mounds, parking area, cart staging area, and cart paths. The Work Plan also includes the removal of greens complexes, fairway sand traps, cart paths, existing tees, and the removal or relocation of trees as required.

The following TolTest, Inc. subcontractors will be on-site at various times:

Sverdrup Environmental, Inc. – prime subcontractor  
Koelper Excavating - overall project remodeling  
Nissen Excavating - pond dredging and earthwork  
Bakley Brothers - drainage system installation  
Paul Loague - golf course architect

#### **1.0 Site Safety and Health Plan (SSHP)**

TolTest will implement this SSHP and a Hazard Analysis for this Delivery Order. This plan follows the requirements of 29 CFR 1910.120(b) and incorporates the requirements of these specifications. This SSHP includes the following:

##### **1.1 Key Personnel**

The Site Safety and Health Officer (SSHO) has the overall responsibility for ensuring that the provisions of this Site Safety & Health Plan (SSHP) are implemented in the field. The SSHO, Quinn Hutchinson, will be present during the

period that heavy equipment is operating and will observe and record the field activities. As field conditions change, decisions will be made regarding additional protective measures. Personnel assigned to this project are experienced and meet the supervisory training requirements specified by OSHA in 29 CFR 1910.120 as well as First Aid and CPR Training. In the event the SSHO becomes injured or impaired, field personnel can render First Aid.

The Project Supervisor, Mr. Darrell Koelper, will be also be responsible for the daily oversight of field personnel and will assist the SSHO in the administration of this SHASP.

The TolTest, Inc. Project Manager, Mr. Jeff Tinney, will have oversight responsibilities of the SSHO and Project Supervisor. Mr. Tinney will also provide direct support of the SHASP thru himself or his designate in the absence of Mr. Hutchinson or Mr. Koelper.

## **1.2 Personal Protective Equipment**

Personal Protective Equipment (PPE) is to be used by employees for each of the site tasks and operations being performed. Level D PPE is anticipated to be used for this site. Level D includes:

- Working Uniform
- Boots/shoe, steel toe
- Gloves
- Hard hat
- Safety Glasses
- Hearing protection as appropriate if noise level exceeds 85 decibels

## **1.3 Site Control Measures**

Control procedures will be implemented to prevent unauthorized access to the work area. Safety fencing and caution tape will be utilized around the work area as necessary. The SSHO will ensure that all personnel entering the site have the necessary training and medical approval documentation as may be required. Personnel entering the site will be given a thorough briefing on the site hazards and safe work procedures prior to entering the work area.

All visitors will be expected to comply with applicable regulatory OSHA requirements as well as the requirements of this SHERP. Visitors will also be expected to provide their own protective equipment. In the event that a visitor does not adhere to the provisions of

the SHERP, they will be requested to leave the work area. All non-conformance incidents will be recorded in the site log. The SSHO/Project Supervisor will document a written record of all personnel entering and exiting the site.

#### **1.4 Site Standard Operating Safety Procedures**

The following safety standards will be adhered to during all site activities:

At least one copy of this plan will be available at the project site in a location readily available to all personnel, including visitors.

No alcohol or drugs shall be present or consumed on site, or in any company vehicle. No personnel will be permitted to work while under the influence of alcohol or drugs while on site or operating a company vehicle.

Emergency equipment will be located in the company vehicles in readily accessible locations. Emergency equipment will consist of fire extinguishers, first aid kit, and mobile telephone.

Visual contact shall be maintained between crewmembers at all times. Crewmembers must observe each other for signs of exposure to heat stress. Indications of adverse effects include, but are not limited to:

- Changes in complexion and skin coloration;
- Changes in coordination;
- Changes in demeanor;

All personnel shall inform their partners or team members of non-visible effects of overexposure to heat stress. Symptoms of heat stress may include:

- Headaches;
- Dizziness;
- Nausea;
- Blurred vision; and
- Cramps

#### **1.5 Material Safety Data Sheets (MSDS)**

The only hazardous materials anticipated on site include unleaded gasoline/diesel fuel, and various oils and lubricants. MSDSs will be included in Appendix A. A copy of the MSDSs will be kept at the job site.



## **2.0 Accident Prevention Plan**

This Accident Prevention Plan includes a description of the work activity, probable hazards related to the work, and proactive precautionary measures that will be taken for safeguarding against and minimizing or eliminating each particular hazard. The Accident Prevention Plan addresses daily safety inspections, accident reporting, and heavy equipment safety as discussed in the following paragraphs:

### **2.1 Daily Safety Inspections**

All machinery and equipment will be inspected and tested daily by Koelper Excavating personnel to ensure a safe operating condition. Inspections and tests will be in accordance with the manufacture's recommendations and will be documented. Records of tests and inspections will be maintained at the site and will be made available upon request. Daily Safety Inspection reports will become part of the project file.

### **2.2 Accident Reporting**

All reporting and record keeping required in Section 01.D of EM 385-1-1 will be adhered to. TolTest, Inc. forms will be completed for all incidents including personal injury reports, safety incident reports, equipment damage reports, and vehicle accident reports. All reports will be submitted to the NTC representative within 24 hours of any accident. Accident reports will become part of the project file.

### **2.3 Excavation Safety**

All excavating work will be conducted in strict conformance with, EM 385-1-1 and 29 CFR 1926.650 through 26 CFR 1926.653, including requirements for continuously sloping excavations to 1-1/2 to 1 (33°41') angle of repose.

Excavation work will not commence until TolTest, Inc. has contacted the Golf Course Superintendent and JULIE (Joint Utility Location Information for Excavators) to determined locations of any underground utilities.

#### Overhead Utilities

Clearances to adjacent overhead transmission and distribution electrical lines will be sufficient for the movement of vehicles and operation of construction equipment. The requirements stated in EM-385-1-1, 29 CFR 1926 and the National Electric Safety Code will be followed by TolTest.

## Underground Utilities

As a standard practice for excavating, TolTest, Inc. will contact the Golf Course Superintendent and JULIE to locate and mark all underground utilities in the area. TolTest, Inc. will not commence work until all utilities have been located.

## Open Excavations

If the excavation must remain open during periods when the work site is unoccupied (i.e., overnight, over a weekend, and other similar off periods) barricades and/or warning devices will be placed around the excavation in such a manner to alert personnel to the danger and prevent them from falling into the excavation.

Listed below is a description of each task/operation in terms of the definable features associated with the major phase of work. The protective measures to be implemented during completion of those operations are identified as well as hazard prevention measures. Activity Hazard Analyses have been developed for:

Dredging, Excavating and Construction of Ponds

Soils Excavation

Construction of Golf Course

Construction of Parking and Cart Staging Areas

Construction of Cart Paths

The anticipated hazards are identified for each task, followed by hazard prevention measures.

### **2.3.1 Dredging, Excavating and Construction of Ponds**

#### **Hazards:**

Exposure to biological hazards and wildlife such as snakes, other animals, insects, and poisonous plants and buried sharp objects.

Slips, trips, and falls.

Back strain due to carrying equipment and materials.

Driving vehicles on uneven or unsafe surfaces can result in accidents due to overturned vehicles.

Drowning

Thermal stress.

#### **Hazard Prevention Measures:**

Wear long sleeved clothing and slacks to minimize contact with irritant and toxic plants and to protect against insect bites. Appropriate first aid supplies on hand for an individuals' known allergic conditions/reactions.

Avoid wildlife when possible. In case of an animal bite, perform first aid and obtain medical treatment if necessary. Perform a tick check after leaving a wooded or vegetated area.

Be alert and observe terrain while walking to minimize slips and falls. Avoid walking near the edge of the ponds until they are pumped out. Steel-toed boots provide additional support and stability.

Use proper lifting techniques to prevent strains.

Ensure all maintenance is performed on vehicles before going to the field. A site surveillance on foot might be required to choose clear driving paths.

Implement thermal stress management techniques identified in Section 3.

#### **2.3.2 Soils Excavation, Construction of Golf Course, Construction of Parking Lot, Cart Paths and Cart Staging Areas**

##### **Hazards:**

Personnel may enter excavations, mostly during the operation of heavy equipment. Hazards may include cave-ins, slides, and falling debris.

Noise levels exceeding the OSHA PEL of 85 decibels (dB) are both a hazard and a hindrance to communication. Exposure above the PEL may result during operation of the heavy equipment.

Struck by flying particles or contact with moving parts of equipment; e.g., hydraulics, belts, gears may cause injury.

Moving the heavy equipment over uneven terrain may cause the vehicle to roll over or get stuck. Be aware of hazards associated with moving heavy machinery and other associated injury.

High-pressure hydraulic lines and airlines used on heavy equipment are hazardous when they are in need of repair or incorrectly assembled. These present "struck by" type of hazards.

Contact with underground/overhead utility lines. These present electrocution type of hazards.

Golf course patrons may be injured unless they are prevented from being in the immediate vicinity of the construction operations

#### **Hazard Prevention Measures:**

If personnel are to enter the excavation, the AHA will be revised to address the USACE EM 385-1-1, OSHA Excavation/Trench Standard and the OSHA Confined Space Standard.

Wear proper PPE as specified. Hard hats, safety glasses and safety shoes must be worn at all times when working around heavy equipment. Secure loose clothing. Wear hearing protection when operating the equipment.

Keep a safe distance from the buckets.

Block all wheels; level the equipment; make sure outriggers are extended prior to excavating.

All chains, high pressure lines, and cables should be inspected prior to use for weak spots, frays, etc.

Locate and mark all utility lines before excavating.

Maintain minimum 20 feet from overhead utility lines during the operation.

Overhead utilities should be considered "live" until determined otherwise.

No excavating will occur during impending electrical storms, tornadoes, or high winds that may create a work hazard.

If any excavation or construction area must remain open during periods when the work site is unoccupied (i.e., overnight, over a weekend, and other similar off periods) barricades will be placed around the excavations/construction areas in such a manner to deter patrons from entering the construction zone.

### **3.0 Emergency Response Plan**

TolTest, Inc. will implement an Emergency Response and Contingency Plan, in accordance with OSHA standards 29 CFR 1910.120(L). This plan addresses as a minimum the following:

#### **3.1 Evacuation Routes and Procedures**

Daily safety meetings will identify the work zones for each boring location prior to the commencement of work. In the event of an emergency which necessitates evacuation of the site, all personnel will be expected to leave the work zone, and mobilize at a safe distance, in an area using the designated evacuation routes. Personnel will remain at that area until the SSHO/site supervisor provides further instructions.

#### **3.2 Emergency Medical Treatment and First Aid**

There are no anticipated hazards expected on site that require specific medical attention or protocols; however, employees participate in TolTest, Inc. medical screening and surveillance programs. If an injury/illness or exposure occurs, employees must seek medical attention immediately. TolTest, Inc. personnel are trained in first aid and CPR to administer immediate assistance.

##### **3.2.1 Thermal Stress - Heat**

Physical hazards may involve heat-related symptoms such as heat stress, heat cramps, heat exhaustion, or heat stroke.

Heat stress is the aggregate of environmental and physical work factors that make up the total heat load imposed on the body. The environmental factors of heat stress include air temperature, humidity, radiant heat exchange, wind and water vapor pressure (related to humidity). Physical work contributes to the total heat stress by producing metabolic heat in the body, proportional to the intensity of the work. Heavy physical labor can greatly increase the likelihood of heat fatigue, heat exhaustion, and heat stroke, the latter being a life threatening condition. Heat stress monitoring and

observation of personnel shall commence when the ambient temperature is 80°F or above (70°F, if chemical protective clothing is worn).

All employees will be informed of the possibility and symptoms of heat stress. If an employee experiences extreme fatigue, cramps, dizziness, headache, nausea, profuse sweating, or pale, clammy skin, the employee and the SSHO/Site Supervisor will take control measures. If the symptoms do not subside after a reasonable rest period, the SSHO/Site Supervisor shall seek medical assistance.

**To prevent heat stress, the following control measures will be implemented:**

Site workers will be encouraged to drink plenty of water throughout the day.

On-site drinking water will be kept cool to encourage personnel to drink frequently.

A work regimen that will provide adequate rest periods for cooling down will be established, as required.

All personnel will be advised of the dangers and symptoms of heat stroke, heat exhaustion, and heat cramps.

Employees should be instructed to observe and monitor themselves and coworkers for signs of heat stress and to take additional breaks as necessary.

All breaks should take place in cool, shaded rest areas.

### **Heat Cramps**

Heat cramps are caused by heavy sweating and inadequate electrolyte replacement. Symptoms include muscle spasms and pain in the hands, feet or abdomen.

### **Heat Exhaustion**

Heat exhaustion occurs from increased stress on various body organs. Signs and symptoms include:

Pale, cool, moist skin  
Dizziness, nausea

Heavy sweating  
Fainting

### **Heat Stroke**

Heat stroke is the most serious form of heat stress and should always be treated as a medical emergency. The body's temperature regulation system fails and the body temperature rapidly rises to critical levels. Immediate action must be taken to cool the body before serious injury or death occurs. Signs and symptoms of heat stroke include:

Red, hot, usually dry skin  
Nausea  
Strong, rapid pulse and confusion

Lack of or reduced respiration  
Dizziness and confusion  
Coma

### **3.3 Emergency Alerting and Response Procedures**

The following information will be used for on-site emergencies which require immediate actions to prevent additional problems or harm to responders, the public, property, or the environment.

The on-site emergency phone number is **688-3333**. A telephone is located inside the TolTest Project Trailer located at the project sight. Below is a list of on-sight safety personnel, emergency service organizations with telephone numbers and directions to the nearest hospital.

#### **3.3.1 On-Site Safety Personnel**

Jeff Tinney  
Quinn Hutchinson  
David Ebeling  
Gary L. Vogelsong

#### **3.3.2 Emergency Telephone Numbers**

FIRE DEPARTMENT - (847) 688-3333  
SECURITY - (847) 688-3333  
NATIONAL RESPONSE CENTER - (800) 424-8802  
HOSPITAL & EMS - (847) 688-3333

#### **3.3.3 Directions to Hospital(s):**

The **Veterans Administration Hospital** is closest to the project site. Travel east on Buckley Road (Rt. 137) to the third traffic light (first traffic light past Green Bay Road), Turn right (south) into hospital grounds and follow signs to emergency entrance.

A secondary hospital would be **St. Therese Medical Center** located at 2615 Washington Street, Waukegan. The fastest route to this hospital is to exit west on Buckley Road (Rt. 137) from the golf course, turn right (north) at the second stop

light onto Rt. 41, at third (3<sup>rd</sup>) exit, exit right (east) onto Washington Street, turn right into St. Therese Medical Center Emergency two (2) blocks past Green Bay Road.

### **3.4 Spill and Discharge Control Plan**

TolTest, Inc. will implement, maintain, supervise, and be responsible for a comprehensive Spill and Discharge Control Plan. This plan provides contingency measures for potential spills and discharges from on-site usage of oil/fuel. If a spill or discharge occurs, the following actions, at a minimum, will be taken:

- Notify the NTC representative immediately.
- Take immediate measures to control and contain the spill within the site boundaries. This will include, at a minimum, the following actions:
  - Keep unnecessary people away, isolate hazardous areas, and deny entry
  - Do not allow anyone to touch spilled material
  - Keep combustibles away from the spilled material
  - Take samples for analysis to determine that clean-up is adequate
  - Take other corrective measures, as needed

A written report will be submitted to the NTC within seven days of a verbal report. Personnel will be instructed in the operation and maintenance of equipment to prevent the discharge of oil/fuel and applicable pollution prevention and control regulations. The SSHO/site supervisor will conduct spill prevention briefings daily during safety meetings for all personnel who are involved with handling, receipt, storage, and/or cleanup of oil/fuel.

#### **3.4.1 Storage**

All tanks, containers, and pumping equipment used for the storage or handling of flammable and combustible liquids will be labeled or placarded in accordance with the Department of Transportation. Oils or fuels temporarily stored will be kept in tightly sealed containers, with the exception of proper venting, in fire-resistant areas and at safe distances from ignition sources.



### **3.4.2 Pumping of Flammable and Combustible Liquids**

Flammable liquid pumping systems will be electrically bonded and grounded, and will be drawn from, or transferred into vessels, containers, or tanks through a closed piping system, from safety cans, by means of a device drawing through the top, or from a container, or portable tanks, by gravity or pump, through an approved self closing valve. Transferring by means of air pressure on the container or portable tank is prohibited.

### **3.4.3 Equipment Inspection**

Equipment inspection is part of the daily routine during field activities. The site supervisor to ensure that no oil/fuel spill has accumulated in any area will conduct a daily visual inspection of the equipment. Equipment and safety issues will be documented in the daily report.

**APPENDIX A**  
**Material Safety Data Sheets**

**APPENDIX B**  
**Incident Form**



## Accident & Incident Report

☐ Personal Injury/Illness

☐ First Aid

☐ Other: \_\_\_\_\_

☐ Safety/Non-Injury Incident

☐ Close Call

☐ Vandalism / Property Damage

☐ Personal Property

☐ Company Property

☐ Other: \_\_\_\_\_

☐ Vehicle Incident; Vehicle #: \_\_\_\_\_

☐ Accident

☐ Body Damage

☐ Theft

☐ Equipment Damage

☐ Lost

☐ Stolen

Associates Name: \_\_\_\_\_

SS#: \_\_\_\_\_

Date Incident Occurred: \_\_\_\_\_

Time of Incident: \_\_\_\_ A.M. P.M.

Supervisor's Name: \_\_\_\_\_

Date and Time Reported: \_\_\_\_\_

Project Manager's Name: \_\_\_\_\_

Names of Witnesses to the Incident: \_\_\_\_\_

In case of accident, were the police called: \_\_\_\_ Yes \_\_\_\_ No If yes, who responded: \_\_\_\_\_

Describe the Events leading to the Incident: \_\_\_\_\_

Task at which the employee was engaged (Describe any tools or equipment being used): \_\_\_\_\_

Description of the work area: \_\_\_\_\_

Did the incident take place on the premises: \_\_\_\_ Yes \_\_\_\_ No Location: \_\_\_\_\_

Did associate receive medical care? \_\_\_\_ Yes \_\_\_\_ No Number of days NOT worked? \_\_\_\_\_

If yes, where (Place, city, and phone #): \_\_\_\_\_

Type of injury: \_\_\_\_\_ Part of body injured: \_\_\_\_\_  
(Sprain, Strain, Cut, Abrasion, Contusion, Break, etc.)

Have you ever injured this area before? ☐ Yes ☐ No If yes, when: \_\_\_\_\_

What part of the vehicle/equipment was damaged (list part and repair estimate)?

1. \_\_\_\_\_ 2. \_\_\_\_\_

3. \_\_\_\_\_ 4. \_\_\_\_\_

Safety Officer's Comments: \_\_\_\_\_

Description of violation or unsafe action: \_\_\_\_\_

Corrective action (Preventative, Avoidance, Engineered changes): \_\_\_\_\_

Signature of Associate: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Departmental Safety Officer: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Corporate Safety Officer: \_\_\_\_\_ Date: \_\_\_\_\_

#### HUMAN RESOURCES DEPARTMENT

ABRA Case #: \_\_\_\_\_ Lost Time: Y N Restrictions: \_\_\_\_\_

Recordable: Y N # Days Away: \_\_\_\_\_ # Days Restricted: \_\_\_\_\_

Out of State: Y N Filed with BWC: Y N Date filed: \_\_\_\_\_

BWC Claim #: \_\_\_\_\_ Date Closed: \_\_\_\_\_

**APPENDIX C**  
**Hazard Analysis**

## HAZARD ANALYSIS

ACTIVITY Site Preparation/Layout ANALYZED BY/DATE \_\_\_\_\_ REVIEWED BY/DATE \_\_\_\_\_  
PRINCIPAL STEPS

Site walk through

### POTENTIAL HAZARDS

### RECOMMENDED CONTROLS

1. Exposure to irritant and toxic plants such as poison ivy and sticker bushes may cause allergic reactions.
2. Surfaces covered with heavy vegetation and under growth create a tripping hazard.
3. Back strain due to carrying instruments.
4. Native wildlife such as rodents, ticks, and snakes present the possibility of insect bites and associated diseases such as Lyme disease.
5. Driving vehicles on uneven or unsafe surfaces can result in accidents such as overturned vehicles or flat tires.
6. Electrical hazard due to fallen lines.
7. Heat stress/cold stress exposure.

7. Implement heat stress management techniques such as shifting work hours, fluid intake, and monitoring employees, especially high risk

1. Wear long sleeved clothing and slacks to minimize contact with irritant and toxic plants and to protect against insect bites. Appropriate first aid for personnel's known allergic reactions.
2. Be alert and observe terrain while walking to minimize slips and falls. Steel toed boots provide additional support and stability.
3. Use proper lifting techniques to prevent back strain.
4. Avoid wildlife when possible. In case of an animal bite, perform first aid and capture the animal, if possible, for rabies testing. Perform a tick check after leaving a wooded or vegetated area.
5. Ensure all maintenance is performed on vehicles before going to the field. A site surveillance on foot might be required to choose clear driving paths.
6. Ensure fallen power lines are not energized.

### TRAINING REQUIREMENTS

1. Review hazard analysis with personnel performing the site walk through prior to start

## HAZARD ANALYSIS

ACTIVITY Excavation ANALYZED BY/DATE \_\_\_\_\_ REVIEWED BY/DATE \_\_\_\_\_

### PRINCIPAL STEPS

Subsurface Soil Sampling

### POTENTIAL HAZARDS

### RECOMMENDED CONTROLS

1. Contact with or inhalation of contaminants, potentially in high concentrations in sampling media.
2. Back strain and muscle fatigue due to lifting, shoveling and augering techniques.
3. Contact with or inhalation of decontamination solutions.

1. To minimize exposure to chemical contaminants, a thorough review of suspected contaminants should be completed and implementation of an adequate protection program.
2. Proper lifting (pre-lift weight assessment, use of legs, multiple personnel) techniques will prevent back strain. Use slow easy motions when shoveling, augering, and digging to decrease muscle strain.
3. Material Safety Data Sheets for all decon solutions should be included with each Site Health and Safety Plan.
4. First aid equipment should be available based on MSDS requirements.

EQUIPMENT TO BE USED

INSPECTION REQUIREMENTS  
TRAINING REQUIREMENTS



## HAZARD ANALYSIS

ACTIVITY Excavations ANALYZED BY/DATE \_\_\_\_\_ REVIEWED BY/DATE \_\_\_\_\_

### PRINCIPAL STEPS

Excavation, Backfill, and Site Grading

### POTENTIAL HAZARDS

#### RECOMMENDED CONTROLS

1. Noise levels exceeding the OSHA PEL of 90 dBA are both a hazard and a hindrance to communication.
2. Fumes (carbon monoxide) from the heavy equipment.
3. Overhead utility wires, i.e., electrical and telephone, can be hazardous when the dump truck bed is in the upright position.
4. Falling backfill material from dump truck may cause injury.
6. Moving the equipment over uneven terrain may cause the vehicle to roll over or get stuck in a rut or mud. Be aware of hazards associated with moving heavy machinery and other associated injury.
7. High pressure hydraulic lines and air lines used on heavy equipment are hazardous when they are in ill repair or incorrectly assembled.
8. No personnel will enter the excavation, therefore, no hazards. Hazards may include cave-ins, slides, hazardous atmospheres, falling debris.
10. If personnel are to enter the excavation, this AHA will be revised to address the USACE EM 385-1-1, OSHA Excavation/Trench Standard and the OSHA Confined Space Standard.

1. Review the contaminants suspected to be on-site and perform air monitoring as required. Shut down equipment and/or divert exhaust fumes.
2. All chains, lines, cables should be inspected daily for weak spots.
3. Ear muffs and ear plugs effectively reduce noise levels.
4. Hard hats should be worn at all times when working around a heavy equipment.
5. Secure loose clothing.
6. To avoid contact with any overhead lines, the truck bed should be lowered prior to moving the truck. Overhead utilities should be considered "live" until determined otherwise.
7. The truck bed should not be erected within 10 feet of an overhead electrical line until the line is deenergized, grounded, or shielded and an electrician has certified that arcing cannot occur.
8. Know the minimum working distances around "live" overhead power lines.
9. All high pressure lines should be checked prior to and during use.

### EQUIPMENT TO BE USED

Dump truck

Backhoe

Trackhoe

Loader

### INSPECTION REQUIREMENTS

#### TRAINING REQUIREMENTS

1. Fill out Safety Inspection Checklist
1. Train personnel to fill out ORD Form 892
1. Fill out Safety Inspection Checklist
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